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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/590,657

06/07/2000

Bart J. Bombay

59.0027

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09/21/2004

SCHLUMBERGER CONVEYANCE AND DELIVERY

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EXAMINER

CHANG, EDITH M

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/590,657

Applicant(s)

BOMBAY ET AL.

Examiner

Edith M Chang

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,4-11,15,19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,4-6 and 8 is/are allowed.
- 6) ☒ Claim(s) 7,10,11,15,19 and 20 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed on July 19 2004 has been entered and the final rejection of the instant application has been withdrawn.

Drawings

2. The drawings are objected to because the figure 1 needs to add label “downhole telemetry cartridge” to numeral 10; “well-logging tool” to numeral 16; “wireline cable” to numeral 14; “uphole telemetry unit” to numeral 12; and “surface acquisition computer” to numeral 18.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

1. Claims 9-11, 15 and 19-20 are objected to because of the following informalities:

Claim 9, line 4: “a slice” is suggested changing to “the slice”.

Claim 10, line 37: “between 1 and 0” is suggested changing to “between 0 and 1”;

Claims 11 & 20, “range 0.001 to 0.00001” is suggested changing to “0.00001 to 0.001”.

Claim 15, line 6: “the slice residual” is suggested changing to “a slice residual”.

Claim 19, line 23: “between 1 and 0” is suggested changing “between 0 and 1”.

Appropriate corrections are required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7, 10-11, 15 and 19-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7, lines 35-36: “the reference data points” lacks antecedent basis; and line 41: “the complex scalar product” lacks antecedent basis.

Claim 10, line 27: “ $TY_{(n-i)}$ ” lacks antecedent basis and “REF_MAGN” is undefined; line 31: “the second receive circuitry coefficient of propagation mode Y” lacks antecedent basis; line 33: “TXResidual” does not clearly indicate the difference from “TXresidual”; lines 34-35: “the cross-talk adjustment circuit” lacks antecedent basis; and line 38: “the complex scalar product” lacks antecedent basis.

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Claim 15, lines 7-8: “on the first sample” and line 12: “from the first sample” do not clearly indicate how the component determined; line 14: “the coefficients” lacks antecedent basis; line 25: “the reference data points” lacks antecedent basis; and line 30: “the complex scalar product” lacks antecedent basis.

Claim 19, line 12: “the coefficients” lacks antecedent basis; line 15: “ $TY_{(n-i)}$ ” lacks antecedent basis and “REF_MAGN” is undefined; line 17: “the second receive circuitry” lacks antecedent basis; line 19: “TXResidual” does not clearly indicate the difference from “TXresidual”; lines 20-21: “the cross-talk adjustment circuit” lacks antecedent basis; and line 24: “the complex scalar product” lacks antecedent basis.

Claims 11 and 20 depend on the rejected independent claims 10 and 19.

Allowable Subject Matter

4. Claims 2, 4-6 and 8 are allowed.
5. Claims 7, 10-11, 15 and 19-20 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
6. Claim 9 would be allowable if rewritten to overcome the objections set forth in this office action.
7. The following is a statement of reasons for the indication of allowable subject matter:

Claims are allowable over prior art of record because the prior art of record does not teach or suggest, alone or in a combination, among other things, at least a digital telemetry system and its method as a whole, the combination of elements and features as claimed, which includes the receiver receiving signals on at least two propagation modes; the adaptive far-end

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cross-talk cancellation logic for canceling cross-talk occurred between the two propagation modes; and a first propagation mode cross-talk adjustment logic directing the processor to determine a slice residual and update a cross-talk parameter from the slice residual.

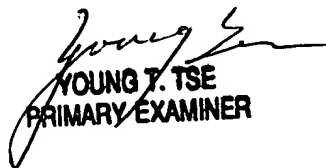
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edith M Chang whose telephone number is 571-272-3041. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayanti Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edith Chang
September 9, 2004


YOUNG T. TSE
PRIMARY EXAMINER